

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-27. (canceled)

28. (currently amended) A method for testing and selecting an agent that has an activity on clonal growth, comprising the steps:

a) selecting an agent selected from the group consisting of 4-OH-OPB, drugs, food, food additives, toxins, and microbes, or components from physiological or pathological processes, where said agents or components demonstrate specific inhibition or specific stimulation of clonal growth only in sparsely distributed cells not in identical cells that were collocated in the same culture;

[[a)]] b) testing said agent having an activity on clonal growth with an *in vitro* clonal test to study the effect of said agent on cloning, the *in vitro* clonal step a) comprising:

i) seeding ~~solitary~~ cells sparsely in a soft low gelling temperature agar medium with or without growth factor,

ii) incubating said cells ~~in a low gelling temperature gel~~ at a suitable temperature and atmosphere with said agent having an activity on clonal growth; and

iii) determining the effect of said agent having an activity on clonal growth on cloning of said cells;

[[b)]] c) testing the effect that different degrees of local collocation of cells has on the effect of said agent having an activity on clonal growth on cloning, the testing the effect step [[b)]] c) comprising:

i) transplanting tumor cells to an animal, or seeding experimental cell cultures with any of said cells;

ii) treating the animal with said tumor cells or the cells in experimental cell cultures with said agent;

iii) determining the effect of said agent having [[an]] a specific activity on clonal growth on cloning of said sparsely seeded tumor cells, but not on collocated identical cells in the animal or of the cells in experimental cell cultures;

[[c)]] d) testing said agent having an activity on specific clonal growth with an *in vivo* metastasizing test that determines the effect of said agent having an activity on clonal growth on metastasizing cells, the testing said agent step [[c)]] d) comprising:

i) injecting tumor cells in an animal to develop metastases, ascites or local tumors;

ii) applying the agent having an activity on clonal growth; and

iii) determining the effect of said agent having an activity on clonal growth to affect the liberation of cells, migration, growth in a new place and the ability to form a local tumor, and if the clonal inhibitor is 4-OH-OPB, inhibited liberation of cells, migration and growth in a new place but not formation of local tumors that were not inhibited;

[[d]] e) testing said agent having an activity on clonal growth with an *in vivo* test of clonal growth of immune cells stimulated by immunization;

[[e]] f) evaluating the results obtained with steps ~~a) b), c), and d)~~ and e); and

[[f]] g) determining and selecting said agent having an activity on clonal growth.

29. (canceled)

30. (canceled)

31. (previously presented) The method according to claim 28, wherein the cells are malignant cells, normal cells, cell lines, transformed cells and cells from a tumor or malignant disease of a patient.

32. (currently amended) The method according to claim 28, wherein the cells are immune cells that showed specific clonal growth ~~are cloned and selected~~ after primary immunization.

33. (previously presented) The method according to claim 28, wherein the cells are selected from the group consisting of BHK21/c13, and BHK21/C13 cells transformed with polyoma virus.

34. (currently amended) The method according to claim 28, wherein the medium further comprises insulin, serum, insulin like growth factors, cytokines, or serum extenders, and conditioned medium or a combination of these in order to make growth of normal cells possible in soft agar.

35-36. (canceled)

37. (previously presented) The method according to claim 28, wherein said tumor cells are transplanted Ehrlich carcinoma cells.

38. (previously presented) The method according to claim 28, wherein said method detects an agent that causes an increased number of clones and/or facilitates the growth and migration of metastases and/or growth of primary tumors.

39. (canceled)

40. (previously presented) The method according to claim 28, wherein the agent is selected from the group consisting of drugs, food, food additives, toxins, microbes, a component of a physiological or a pathological process.

41. (previously presented) The method according to claim 28, wherein the agent is a drug.

42. (previously presented) The method according to claim 28, wherein the agent is a food.

43. (previously presented) The method according to claim 28, wherein the agent is a food additive.

44. (previously presented) The method according to claim 28, wherein the agent is a toxin.

45. (previously presented) The method according to claim 28, wherein the agent is a microbe.

46. (previously presented) The method according to claim 28, wherein the agent is a component of a physiological or a pathological process.

47. (currently amended) A method for inhibiting clonal cell growth, comprising, administering to cells an effective amount of a specific clonal mitotic inhibitor determined by the method according to claim 28.

48. (previously presented) The method according to claim 47, wherein the clonal mitotic inhibitors are selected from the group consisting of 4-OH-OPB, colchicine, Ibuprofen, Naproxen, acetyl salicylic acid.

49. (previously presented) The method according to claim 48, wherein the cells are tumor cells.

50. (currently amended) A method for inhibiting clonal cell growth in a subject, comprising: administering to subject an effective amount of a specific clonal mitotic inhibitor determined by the method according to claim 28.

51. (currently amended) The method according to claim 50, wherein the clonal mitotic inhibitors are selected from the group consisting of 4-OH-OPB, colchicine, Ibuprofen, Naproxen,

~~and acetyl salicylic acid, p-hydroxy-azobenzene, 2-Butyl-2-hydroxy-N-(4-hydroxy-phenyl)-N'-phenyl-malonamide, 1,2-diphenyl-4-hydroxy-4-[2-(phenylsulfinyl)ethyl]-3,5-pyrazolidinedione, and analogues thereof.~~

52. (currently amended) The method according to claim 51, wherein the subject has or is at risk of developing a disorder selected from the group consisting of arteriosclerosis, an autoimmune disorder[,], and a rejection of a transplant,~~and a disorder related to cell growth initiated by radioactivity, and viral growth in cells of the organism.~~

53. (previously presented) The method according to claim 52, wherein said viral growth is due to HIV or Herpes infection.

54. (previously presented) The method according to claim 53, wherein 4-OH-OPB is administered to a subject after said subject has been exposed or infected to HIV and before HIV infected cells proliferate.

55. (previously presented) The method according to claim 53, wherein 4-OH-OPB is administered to a subject with chronic infections or AIDS after removing collocated infected cells.

56. (previously presented) The method according to claim 53, wherein 4-OH-OPB is administered in combination with an anti-viral treatment to inhibit drug resistance.

57. (previously presented) The method according to claim 52, wherein 4-OH-OPB is administered as an initial treatment to a subject in order to inhibit metastasis of a cancer.

58. (currently amended) The method according to claim 52, wherein 4-OH-OPB is administered to a subject undergoing conventional cancer treatment including cytotoxins in order to prevent development of drug resistance.

59. (currently amended) A method for stimulating specific clonal cell growth, comprising: administering to cells an effective amount of a clonal mitotic stimulator determined by the method according to claim 28.

60. (currently amended) The method according to claim 59, wherein the specific clonal mitotic stimulators ~~comprise insulin, insulin-like growth factors, conditioned medium, serum factors, Mitot, or serum extenders,~~ include diclofenak or Benzo(a)pyrene.



61. (currently amended) A method for inhibition of specific testing an agent that has an activity on clonal cell growth, comprising the steps:

a) selecting a specific clonal inhibitor or 4-OH-OPB, and screening substances selected from drugs, food, food additives, toxins, microbes, microbes, cosmetics natural stimulants or components from physiological or pathological processes, in order to be able to prevent neoplastic diseases and development of arteriosclerosis in a population;

~~a) testing said agent having an activity on clonal growth with an in vitro clonal test for studying the effect of said agent on cloning, said cloning test comprising:~~

~~i) seeding of solitary cells in a soft agar medium with or without growth factor,~~

~~ii) incubating said cells at a suitable temperature and atmosphere with said agent having an activity on clonal growth; and~~

~~iii) determining the effect of said agent having an activity on clonal growth on cloning of said cells;~~

b) testing the effect that different degrees of local collocation of cells have on the effect of said agent having an activity on clonal growth on cloning, said testing comprising:

- i) transplanting tumor cells to an animal, or seeding experimental cell cultures with BHK21/c13 or BHK21/C13 cells transformed with polyoma virus;
  - ii) treating said tumor cells in the animal or the cells in experimental cell cultures with said agent having an activity on clonal growth;
  - iii) determining the effect of said agent having an activity on clonal growth on cloning of said tumor cells or stimulated immune cells in the individual or the cells in experimental cell cultures;
- c) testing said agent having an activity on clonal growth with an *in vivo* metastasizing test to determine the effect of said agent having an activity on clonal growth on metastasizing cells, said step comprising:
- i) injecting tumor cells in an animal to develop metastases, ascites or local tumors;
  - ii) applying the agent having an activity on clonal growth; and
  - iii) determining the effect of said agent having an activity on clonal growth to affect the liberation of cells, migration, and the ability to form local tumor;
- d) evaluating the results obtained with steps a), b), and c; and

e) determining whether said agent having an activity on clonal growth inhibits or stimulates clonal growth.

62. (canceled)

63. (canceled)

64. (new) A method preparing a pharmaceutical preparation, comprising:

compounding 4-OH-OPB with a pharmaceutically acceptable carrier, wherein the preparation is for the treatment or prophylactics of psoriasis or diseases selected from arteriosclerosis, or from cancer, and wherein the pharmaceutical preparation for cancer is either for prophylaxis of malignant growth or for the treatment or prophylaxis of metastatic spread and local infiltration of malignant tumors.

65. (new) The method according to claim 64, wherein the pharmaceutical preparation is either for the prophylaxis of malignant growth of cancer or for the treatment or prophylaxis of metastatic spread and local infiltration of malignant tumors.

66. (new) The method according to claim 65, wherein the pharmaceutical preparation is for the prophylaxis of malignant growth of cancer.

67. (new) The method according to claim 65, wherein the pharmaceutical preparation is for the treatment or prophylaxis of metastatic spread and local infiltration of malignant tumors.

68. (new) The method according to claim 64, wherein the proviso applies that said cancer is not malignancies derived from CD4 lymphocytes, HIV related Kaposi sarcoma, Sezary syndrome, mycosis fungoides or T cell lymphoma.

69. (new) The method according to claim 64, wherein the preparation is for a pharmaceutical preparation for the treatment or prophylaxis of arteriosclerosis.

70. (new) The method according to claim 64, wherein the preparation is for the treatment or prophylaxis of psoriasis.